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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,187	12/12/2001	David John McComas	090936.0432	4235

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EXAMINER
FERNANDEZ, KALIMAH

ART UNIT	PAPER NUMBER
2881	

DATE MAILED: 05/22/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/016,187	MCCOMAS, DAVID JOHN	
	Examiner	Art Unit	
	Kalimah Fernandez	2881	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-21 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-21 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 19 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 19 recites "the detector...", however two detectors are claimed in claim 1. Therefore, it is unclear which applicant intends, thus rendering claim 19 indefinite.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> **And/Or**
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claims 1-21 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat No 5,168,158 issued to McComas et al.

2. McComas et al discloses a mass spectrometer having a detector (40) and suppression grid (77) (col.8, lines 9-34).

3. McComas et al discloses a detector for detecting the electrons (col.8, lines 10-14).

4. McComas et al discloses a suppression grid placed in the electron flight path in front of the detector (col.8, lines 25-28).

5. McComas et al discloses said grid being electrically conductive (col.8, line 27).

6. McComas et al discloses said grid may receive an applied voltage via endcap (41) (col.7, lines 26-28; col.8, lines 27-28).

7. McComas et al discloses said grid transmits to the detector only a fraction (~90/100 or 90%) of the electrons received at the grid (col.8, lines 25-28).

8. As per claim 3, McComas et al discloses a micro-channel plates (col.8, lines 20-25).

9. As per claim 4, McComas et al discloses a calibration unit (col. 9, lines 23-28; col.11, lines 27-31).

10. As per claims 5-6, McComas et al discloses a foil (38) secondary electron emission surface for scattering electrons to be received at the suppression grid (col.8, lines 35-40).

11. As per claim 7, all limitations are discusses above.

12. As per claim 8, McComas et al discloses the step of setting the applied voltage to receive a known percentage of the electron (col. 9, lines 29-36).

13. As per claim 9, McComas et al discloses the step of periodically scanning a range of voltages applied to the suppression grid (col.7, lines 26-28; col.7, lines 18-25; col.11, lines 23-26).

14. As per claims 10-11, McComas et al discloses measuring counts of the electrons received at the grid as a function of their energy and voltage and of comparing the measured data to stored calibration data (col.10, lines 30-65).

15. As per claim 12, McComas et al discloses the step of measuring counts of the electrons received at the grid as a function of their species, and of comparing the measured data to stored calibration data (col. 11, lines 27-34).

16. As per claims 13-14, McComas et al discloses the use of both detectors (40,44) for calibration purposes (col.9, lines 18-28). McComas et al discloses providing periodic voltages to the second detector (col.9, lines 15-17).

17. As per claim 15, McComas et al discloses a foil (38) for transmitting particles and producing secondary electrons from the particles at the output side of the foil (col.8, lines 35-38).

18. McComas et al discloses a start detector (44) for counting electrons generated from the foil (col.8, lines 38-42).

19. McComas et al discloses a stop detector (40) for counting particles transmitted through the foil (col.8, lines 9-34).

20. McComas et al discloses a suppression grid (77) as claimed (col.8, lines 25-28; also see ground of rejection of claim 1 above).

21. As per claim 16, McComas et al discloses a suppression grid (72) in front of start detector (44) (col.8, lines 42-44).

22. As per claim 17, McComas et al discloses a suppression grid (77) as claimed (col.8, lines 25-28; also see ground of rejection of claim 1 above).

23. As per claims 2 and 18, McComas et al discloses control electronics for varying the voltage applied to the suppression grid (col.7, lines 30-34; col.9, lines 15-17; col.9, lines 25-28).

24. As per claim 19, McComas et al discloses a micro-channel plate (col.8, lines 20-25; col.8, lines 40-42).

25. As per claim 20, McComas et al discloses a calibration unit (col.9, lines 23-28; col.11, lines 27-31).

26. As per claim 21, McComas et al discloses a control unit for applying voltage to the foil (col.7, lines 34-40).

27. Claims 1-3 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by US Pat No 6,294,790 issued to Wienberger.

28. Wienberger discloses a particle detector (col.1, lines 11-13).

29. Wienberger discloses a detector for detecting electrons (col.9, lines 11-19).

30. Wienberger discloses a suppression grid (62) placed in the electron flight path in front of the detector (col.11, lines 61-67; col.12, lines 14-16).

31. Wienberger discloses said grid (62) made from a conductive material (col.11, lines 31-36).

32. Wienberger discloses said grid receives an applied voltage (col.11, lines 61-620.

33. Wienberger discloses said grid operable to transmit to the detector only a fraction of the electrons received at the grid (col.11, lines 31-32). That is, Wienberger's grid (62) is operable to transmit only 30%-70% of incident electrons.

34. As per claim 2, Wienberger discloses varying/altering the voltage applied to the suppression grid (62) via control electronics (col.13, lines 45-69; col.13, line 66-col.14, line 4).

35. As per claim 3, Wienberger discloses a microchannel plate (col.8, lines 35-51).

36. As per claim 7, Wienberger discloses producing secondary electrons at a secondary electron emission surface (col.12, lines 9-10).

37. Wienberger discloses receiving the secondary electrons at a detector (col.8, lines 35-51).

38. Wienberger discloses placing a suppression grid in the electron flight path in front of the detector (col.11, lines 61-67).

39. Wienberger discloses said grid being made from a conductive material (col.11, lines 31-32).

40. Wienberger discloses applying a voltage to the grid (col.11, lines 61-62) such that the grid is operable to transmit to the detector only fraction of the electrons received at the grid (col.11, lines 31-32).

Conclusion

41. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 5,223,711 issued to Sanderson et al teaches a particle detector for detecting secondary electrons (col.6, lines 23-27).

42. Sanderson et al teaches a suppression grid (col.4, lines 18-21;col.6, lines 57-59).

43. Sanderson et al teaches said grid is electrically conductive for receiving an applied voltage (col.5, lines 43-47).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kalimah Fernandez whose telephone number is 703-305-6310. The examiner can normally be reached on Mon-Thus between 8:30am-6:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached on 703-308-4116. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

kf
May 15, 2003

JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800